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A1
Claim 33
auxiliary platform extending into the access opening, the at least one auxiliary platform movable along a perimeter of the access opening of the floor; and
performing predetermined servicing operations on the reactor.

Remarks

The Office Action dated September 17, 2002 have been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1, 4-13, 16-18-24, and 27-33 are pending in this application. Claims 1, 4-8, 11-13, 16-18, 21, 23, 24, 27, 28, 31, and 33 stand rejected. Claims 9, 10, 19, 20, 22, 29, 30, and 32 are withdrawn from consideration. Claims 2, 3, 14, 15, 25, and 26 have been canceled.

Submitted herewith is a Submission Of Marked Up Claims in accordance with 37 C.F.R. § 1.121(c)(1)(ii).

The objection to the specification under 35 U.S.C. § 112 is respectfully traversed.

Applicants respectfully submit that the one skilled in the art would understand that the described and claimed servicing platform is too large to be assembled outside the reactor because it could not be moved inside the reactor because it would not fit through the equipment hatch. Consequently, one skilled in the art would understand that the servicing platform could be assembled piece by piece inside the reactor building or modular subassemblies of the servicing platform could be formed outside the reactor and then assembled into one assembly inside the reactor. Of course, the size of the modular subassemblies are determined by the size of the equipment hatch. Applicants respectfully submit that naturally, it follows, that one skilled in the

art would understand what major components are needed for the assembly or construction of a reactor servicing platform based on the description in the present application.

Further, Applicants submit that paragraph 20 of the application describes that the auxiliary platforms are coupled to the upper and lower rails attached to the circular central beam of the servicing platform by the use of upper and lower rollers. Applicants respectfully submit that one skilled in the art would understand that a lifting device is movably coupled to the frame in the same manner. Accordingly Applicants submit that the specification meets the requirements of Section 112.

For the reasons set forth above, Applicants request that the objection to the specification be withdrawn.

The rejection of Claims 1-8, 11-18, 21, 23-28, 31, and 33 under 35 U.S.C. § 112 is respectfully traversed.

Applicants respectfully submit that for the reasons explained above, the specification and Claims 1-8, 11-18, 21, 23-28, 31, and 33 meet the requirements of Section 112.

For the reasons set forth above, Applicants respectfully request that the Section 112 rejections of Claims 1-8, 11-18, 21, 23-28, 31, and 33 be withdrawn.

The rejection of Claims 1-8, 11-18, 21, 23-28, 31, and 33 under 35 U.S.C. § 102(b) as being anticipated by Toshiba (JP 7-113896) is respectfully traversed.

Toshiba describes a reactor service platform that is mounted to and movable around a circular rail. The reactor service platform includes a rotation stand and a work floor positioned in the center of the rotation stand. An up stand is installed in the center of the work floor with a monorail attached to the upper part of the up stand. A hoist is attached to the monorail. The

work floor includes a rectangular opening to provide access to the reactor from the service platform. A safety railing is mounted around the periphery of the rectangular opening in the work floor. Toshiba does not describe nor suggest an auxiliary platform extending into the access opening.

Claim 1 recites a reactor servicing platform for a nuclear reactor. The reactor servicing platform includes a frame, a support structure, and a floor covering the frame. The floor including a reactor access opening sized to permit access to the reactor pressure vessel. The reactor servicing platform further includes at least one auxiliary platform extending into the access opening. The at least one auxiliary platform is movable along a perimeter of the access opening of the floor.

Toshiba does not describe nor suggest a reactor servicing platform as recited in Claim 1. Particularly, Toshiba does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Toshiba describes a rotatable reactor servicing platform that has a hoist mounted to an up-stand positioned above the reactor access opening in the platform floor. The Office Action suggests that the work floor 15 is an auxiliary platform that is positioned in the “access opening” of structure 12 (rotation stand) and that the work floor is movable around this opening. Applicants respectfully disagree with this suggestion. Applicants submit that the work floor 15 is not movable around the “access opening” of rotation stand 12 but rather the whole platform 10 moves as one piece around circular rail 11. The translation of Toshiba supplied by the Patent Office describes a rotation stand 12 which circles 360 degrees or more and that the work floor is

installed in the central portion of the rotation stand. Toshiba does not describe nor suggest that rotation stand 12 is stationary and that the work floor 15 rotates. Rather, Toshiba describes that the rotation stand rotates and that the work floor is part of the rotation stand so that the work floor rotates along with the rotation stand. Accordingly, Applicants submit that Claim 1 is patentable over Toshiba.

Claims 2 and 3 have been canceled.

Claims 4-8 and 11-12 depend from independent Claim 1. When the recitations of Claim 1 are considered in combination with the recitations of dependent Claims 4-8 and 11-12, Applicants respectfully submit that Claims 4-8 and 11-12 likewise are patentable over Toshiba.

For the reasons set forth above, Applicant respectfully requests that the Section 102(b) rejection of Claims 1, 4-8, 11-13, 16-18, 21, 23, 24, 27, 28, 31, and 33 be withdrawn.

Claim 13 of the present application recites a nuclear reactor that includes a primary containment vessel, a reactor pressure vessel positioned in the primary containment vessel, and a reactor servicing platform. The reactor servicing platform includes a frame, a support structure, and a floor covering the frame. The floor includes a reactor access opening sized to permit access to the reactor pressure vessel, and at least one auxiliary platform extending into the access opening. The at least one auxiliary platform is movable along a perimeter of the access opening of the floor.

Toshiba does not describe nor suggest a nuclear reactor as recited in Claim 13. Particularly, and as explained above, Toshiba does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access

opening. Rather, Toshiba describes a rotatable reactor servicing platform that has a hoist mounted to an up-stand positioned above the reactor access opening in the platform floor. Accordingly, Applicants submit that Claim 13 is patentable over Toshiba.

Claims 14 and 15 have been canceled.

Claims 16-18, 21, and 23 depend from independent Claim 13. When the recitations of Claim 13 are considered in combination with the recitations of dependent Claims 16-18, 21, and 23, Applicants respectfully submit that Claims 16-18, 21, and 23 likewise are patentable over Toshiba.

Claim 24 of the present application recites a method of servicing a nuclear reactor during a reactor outage. The method includes positioning a servicing platform above the reactor pressure vessel and performing predetermined servicing operations. The servicing platform includes a frame, a support structure, and a floor attached to the frame. The floor includes a reactor access opening sized to permit access to the reactor pressure vessel and at least one auxiliary platform extending into the access opening. The at least one auxiliary platform is movable along a perimeter of the access opening of the floor.

Toshiba does not describe nor suggest a method of servicing a nuclear reactor as recited in Claim 24. Particularly, and as explained above, Toshiba does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Toshiba describes a rotatable reactor servicing platform that has a hoist mounted to an up-stand positioned above the reactor access opening in the platform floor. Accordingly, Applicants submit that Claim 24 is patentable over Toshiba.

Claims 25 and 26 have been canceled.

Claims 27, 28, 31 and 33 depend from independent Claim 24. When the recitations of Claim 24 are considered in combination with the recitations of dependent Claims 27, 28, 31 and 33, Applicants respectfully submit that Claims 27, 28, 31 and 33 likewise are patentable over Toshiba.

The rejection of Claims 1, 4, 6-8, 12, 13, 16-18, 21, 27, 28, 31, and 33 under 35 U.S.C. § 102(b) as being anticipated by Forner et al. (US 4,639,351) is respectfully traversed.

Forner et al. describes an assembly platform 6 that includes a carriage 7 movable diagonally over the circular opening of the reactor housing 1. A standpipe 10 that is extensible telescopically and that is fixable in a pass-through of the assembly cover 11 of the reactor pressure vessel 2 is vertically suspended from the carriage 7 on the platform 6. A centering device 12 and a supporting frame 18 which supports a turning machine 22 are located at the lower end of the upright tube 10.

Forner et al. do not describe nor suggest a reactor servicing platform as recited in Claim 1. Particularly, Forner et al. do not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Forner et al. describe an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 1 is patentable over Forner et al.

Claims 1, 4, 6-8, and 12 depend from independent Claim 1. When the recitations of Claim 1 are considered in combination with the recitations of dependent Claims 1, 4, 6-8, and 12,

Applicants respectfully submit that Claims 1, 4, 6-8, and 12 likewise are patentable over Forner et al.

Forner et al. do not describe nor suggest a nuclear reactor as recited in Claim 13.

Particularly, Forner et al. do not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Forner et al. describe an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 13 is patentable over Forner et al.

Claims 16-18, and 21 depend from independent Claim 13. When the recitations of Claim 13 are considered in combination with the recitations of dependent Claims 16-18, and 21, Applicants respectfully submit that Claims 16-18, and 21 likewise are patentable over Forner et al.

Forner et al. do not describe nor suggest a reactor servicing platform as recited in Claim 24. Particularly, Forner et al. do not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Forner et al. describe an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 24 is patentable over Forner et al.

Claims 27, 28, 31, and 33 depend from independent Claim 24. When the recitations of Claim 24 are considered in combination with the recitations of dependent Claims 27, 28, 31, and

33, Applicants respectfully submit that Claims 27, 28, 31, and 33 likewise are patentable over Forner et al.

For the reasons set forth above, Applicant respectfully requests that the Section 102(b) rejection of Claims 1, 4, 6-8, 12, 13, 16-18, 21, 27, 28, 31, and 33 be withdrawn.

The rejection of Claims 1, 4, 6-8, 12, 13, 16-18, 21, 27, 28, 31, and 33 under 35 U.S.C. § 102(b) as being anticipated by Yoshigawa (Sho 57[1982]-161273) is respectfully traversed.

Yoshigawa describes a pressure vessel of a atomic reactor located within the reactor well. Above the reactor well, two straight rails are positioned in the horizontal direction. A carriage is moveable on the rails. The carriage includes a moving table that can move along the horizontal linear direction nearly perpendicular to the rails. The moving table includes an upper and a lower section. A driving motor and a hoist are mounted on the floor of the upper section. The carriage , the moving table, and the hoist together comprise a position-setting device.

Yoshigawa does not describe nor suggest a reactor servicing platform as recited in Claim 1. Particularly, Yoshigawa does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Yoshigawa describes an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 1 is patentable over Yoshigawa.

Claims 1, 4, 6-8, and 12 depend from independent Claim 1. When the recitations of Claim 1 are considered in combination with the recitations of dependent Claims 1, 4, 6-8, and 12,

Applicants respectfully submit that Claims 1, 4, 6-8, and 12 likewise are patentable over Yoshigawa.

Yoshigawa does not describe nor suggest a nuclear reactor as recited in Claim 13. Particularly, Yoshigawa does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Yoshigawa describes an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 13 is patentable over Yoshigawa.

Claims 16-18, and 21 depend from independent Claim 13. When the recitations of Claim 13 are considered in combination with the recitations of dependent Claims 16-18, and 21, Applicants respectfully submit that Claims 16-18, and 21 likewise are patentable over Yoshigawa.

Yoshigawa does not describe nor suggest a reactor servicing platform as recited in Claim 24. Particularly, Yoshigawa does not describe nor suggest a reactor servicing platform that includes at least one auxiliary platform extending into the access opening in the platform floor with the at least one auxiliary platform movable along a perimeter of the access opening. Rather, Yoshigawa describes an assembly platform that includes a standpipe extending from a carriage that is movable along a beam on top of the platform. Accordingly, Applicants submit that Claim 24 is patentable over Yoshigawa.

Claims 27, 28, 31, and 33 depend from independent Claim 24. When the recitations of Claim 24 are considered in combination with the recitations of dependent Claims 27, 28, 31, and

33, Applicants respectfully submit that Claims 27, 28, 31, and 33 likewise are patentable over Yoshigawa.

For the reasons set forth above, Applicant respectfully requests that the Section 102(b) rejection of Claims 1, 4, 6-8, 12, 13, 16-18, 21, 27, 28, 31, and 33 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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For: REACTOR SERVICING PLATFORM

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SUBMISSION OF MARKED UP PARAGRAPHS AND CLAIMS

Commissioner for Patents

Washington, D.C. 20231

A marked-up version of amended Paragraph 1 and Claims 1 and 17, in accordance with 37 C.F.R. § 1.121(c)(1)(ii), follows below.

IN THE SPECIFICATION

Please replace paragraph 1 with the following paragraph:

[0001] This invention relates generally to nuclear reactors, and more particularly to a service platform for use in a nuclear reactor.

IN THE CLAIMS

1. (once amended) A reactor servicing platform for a nuclear reactor, the nuclear reactor comprising a reactor pressure vessel positioned in a primary containment and at least one refuel bridge, the primary containment comprising a refueling floor, said servicing platform comprising:

a frame;

a support structure;

a floor covering said frame, said floor comprising a reactor access opening sized to permit access to the reactor pressure vessel[.]; and
at least one auxiliary platform extending into said access opening, said at least one auxiliary platform movable along a perimeter of said access opening of said floor.

13. (once amended) A nuclear reactor comprising:
a primary containment vessel;
a reactor pressure vessel positioned in said primary containment vessel; and
a reactor servicing platform comprising:
a frame;
a support structure;
a floor covering said frame, said floor comprising a reactor access opening sized to permit access to said reactor pressure vessel[.]; and
at least one auxiliary platform extending into said access opening, said at least one auxiliary platform movable along a perimeter of said access opening of said floor.

24. (once amended) A method of servicing a nuclear reactor during a reactor outage, the reactor comprising a primary containment vessel and a reactor pressure vessel positioned in the primary containment vessel, said method comprising:
positioning a servicing platform above the reactor pressure vessel, the servicing platform comprising a frame, a support structure, [and] a floor attached to the frame, the floor comprising a reactor access opening sized to permit access to the reactor pressure vessel, and at least one

auxiliary platform extending into the access opening, the at least one auxiliary platform movable
along a perimeter of the access opening of the floor; and
performing predetermined servicing operations on the reactor.

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